

SCHMIDT

LASER CATALOG



CONTACT US

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ITAR Certified



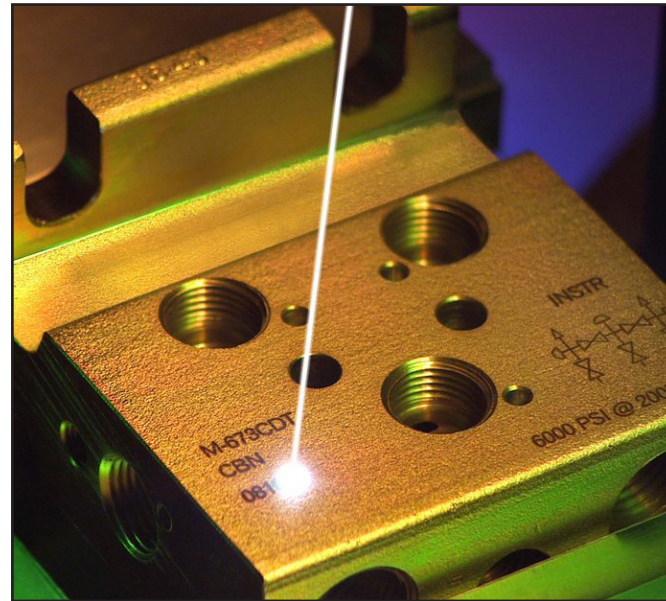
ISO 9001:2015 certified



Federal Firearms
 Licensed Manufacturer



US Departments of
 Defense Logistics Agency



Since 1895, GT SCHMIDT has been manufacturing marking equipment for permanent identification and product traceability.

We have been designing, manufacturing, and selling American-made laser marking machines for over 30 years. Powerful and versatile, our lasers are great for a variety of applications in any industry. And if you don't see what you need here, we can build a laser marking system that is specifically designed for your unique application.

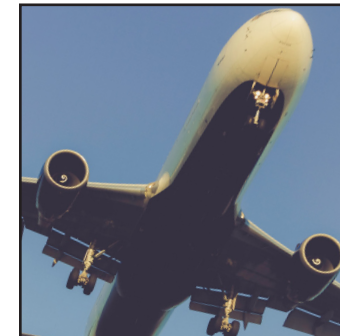
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INDUSTRIES SERVED

With our variety of lasers and custom engineering services, GT SCHMIDT can provide a laser solution for marking applications in any industry.

Our design and engineering teams have worked with customers from every industry to design, manufacture, and deliver laser marking solutions built for specific applications. Whether you are marking airplane parts, animal tags, or medical devices, no application is too unique.



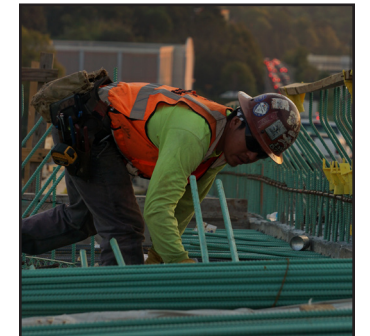
AEROSPACE



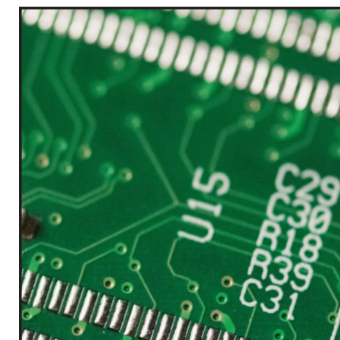
AGRICULTURAL



AUTOMOTIVE



CONSTRUCTION



ELECTRONICS



FIREARMS



LIVESTOCK



MEDICAL



MILITARY



OIL & GAS



PACKAGING



WIND & SOLAR



LASER SOURCES

GT SCHMIDT laser marking systems are available with Fiber, YVO4, Green, UV, and CO2 laser sources. Each laser source is ideal for different laser processes and are available in a variety of wattages. Depending on your preferred laser marking process and your marking depth requirements, we can help determine which source is best for your application.



Marking wood with a CO2 laser

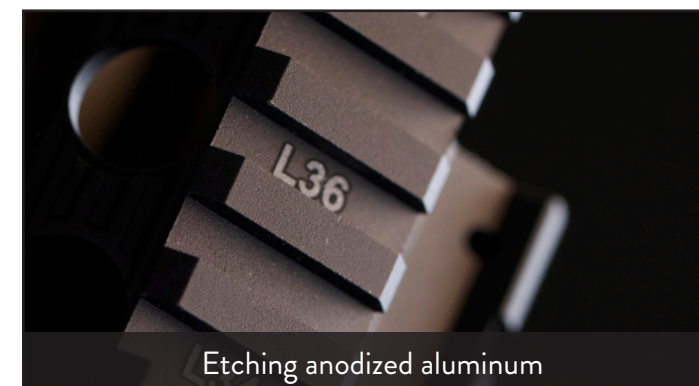


Engraving steel with a fiber laser

LASER SOURCE	WAVELENGTH	COMMON USES
Fiber & YVO4	1064 nm	Industrial marking and engraving applications; great for all metals and some plastics.
Green	532 nm	Marks soft plastics such as silicon, organic polymers, PCB boards, and similar materials used in the solar and semiconductor industry.
UV	355 nm	Ideal for applications requiring a low thermal footprint, such as glass and ceramics.
CO2	10,600 nm	Great for non-metal applications such as wood, leather, paper, acrylic, textiles, and some plastics.

LASER PROCESSES

Laser marking is often used to describe the general concept of using a laser to create a permanent identification mark on a part or product. But laser marking can be broken down into several different types of processes that are generally categorized by how a specific material interacts with the heat from a laser or how that material is altered.



Etching anodized aluminum



Annealing stainless steel

PROCESS	DESCRIPTION
Annealing / Heat Marking	A laser applies low heat to the surface of a part, causing a thermochemical reaction and creating oxide layers that result in a visible and permanent mark that cannot be felt since no material is displaced.
Engraving	Laser engraving displaces material from the part. Deep engraving can be achieved using high wattage lasers and/or multiple passes.
Etching	Etching is a form of engraving, though only a small amount of material is removed. The process usually removes a coating layer from the base material.
Carbonization	Carbonization is a thermochemical laser marking process typically performed on light and clear polymers and resulting in a dark or gray laser mark. Laser carbonization can also be performed on organic carbon containing materials such as paper, cardboard and wood.
Foaming	Laser Foaming, sometimes also referred to as frothing, occurs when the laser beam heats the surface of the carbon containing plastic, causing oxidized gas bubbles to form in the top layer. The result is a raised mark.

FEATURES

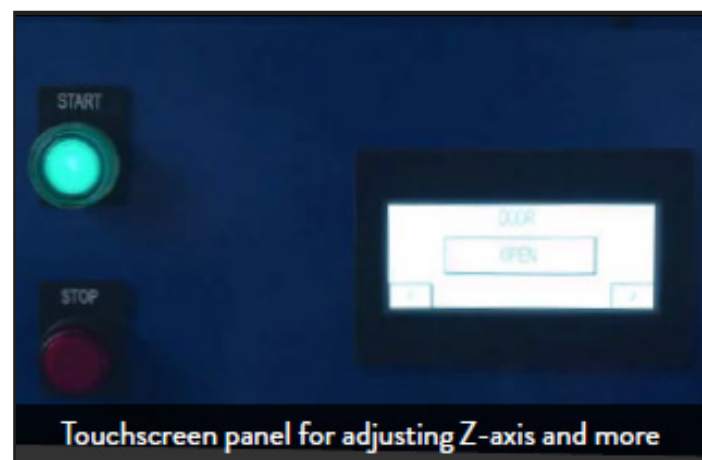
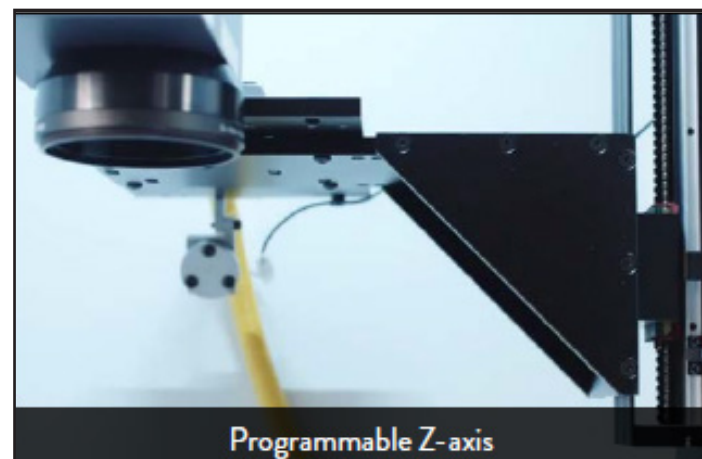
- 11"X 11" VIEWING WINDOW
- AIMING POINTER
- WORK LIGHT
- LCD TOUCHSCREEN CONTROLS
- FILTERED FORCED-AIR COOLING
- FUME EXTRACTOR PORT
- INCLUDES PC, MONITOR, KEYBOARD, AND MOUSE
- FREE TWO-YEAR WARRANTY

COMMONLY SOLD WITH

- MOBILE CART
- FUME EXTRACTOR
- CUSTOM FIXTURING
- SWING ARM
- ROTARY CHUCK



GeoMARK *Pro* *



The Class I GeoMARK Pro laser marking system features a 20-watt fiber laser and a 163mm lens with an extended frequency range and high-speed scanning. Precise control software, a touchscreen, and powered door come standard.

Easy-to-use windows-based software makes creating layouts, text, and importing images a breeze. Additionally, you can easily generate 1D barcodes, 2D data matrices, QR codes, and implement serialization and date/time codes.

MACHINE SPECIFICATIONS

Dimensions (W x D x H)	36" X 30" X 39"
Required Compressed Air	80 PSI 2SCFM
Power Input	110v - 3 connections required (laser, PC, and monitor), 4 connections with a fume extractor
Z-Axis Control	Powered, programmable (manual available)
Control Panel Buttons	LCD touchscreen, start, stop, emergency stop
Computer And Operating System	PC with Windows 11. Monitor, key-board, and mouse included.
FDA Classification	Certified class I laser enclosure

LASER SPECIFICATIONS

Laser Source	Q-Switched Ytterbium Fiber		
Central Wavelength	1064nm		
Power Wattage Options	20, 30, and, 50 watts		
Lens Size Options	163mm	254mm	330mm
Marking Field	110mm x 110mm	170mm x 170mm	230mm x 230mm
Focal Distance (approximate)	183mm	285mm	386mm
Max Part Height	11.8"	7.8"	3.8"
Frequency Range	2 - 200kHz		



FEATURES

- 11" X 11" VIEWING WINDOW
- AIMING POINTER
- WORK LIGHT
- LCD TOUCHSCREEN CONTROLS
- FILTERED FORCED-AIR COOLING
- FUME EXTRACTOR PORT
- INCLUDES PC, MONITOR, KEYBOARD, AND MOUSE
- TWO-YEAR WARRANTY

COMMONLY SOLD WITH

- MOBILE CART
- SWING ARM
- FUME EXTRACTOR
- BARCODE READER
- LIGHT CURTAINS



GeoMARK *Pro SM*



The Class I GeoMARK Pro SM laser marking system With a narrower enclosure design and easily accessible controls, the GeoMARK Pro SM is ideal for an inline tabletop laser workstation. It comes standard with a 20-watt fiber laser source, 163 lens, powered door, programmable Z-axis, and LCD touchscreen controls.

Easy-to-use windows-based software makes creating layouts, text, and importing images a breeze. Additionally, you can easily generate 1D barcodes, 2D data matrices, QR codes, and implement serialization and date/time codes.

MACHINE SPECIFICATIONS

Dimensions (W x D x H)	26" X 33.5" X 38"
Required Compressed Air	80 PSI 2SCFM
Power Input	110v - 3 connections required (laser, PC, and monitor), 4 connections with a fume extractor
Z-Axis Control	Powered, programmable
Control Panel Buttons	LCD touchscreen, start, stop, emergency stop
Computer And Operating System	PC with Windows 11. Monitor, keyboard, and mouse included.
FDA Classification	Certified class I laser enclosure

LASER SPECIFICATIONS

Laser Source	Q-Switched Ytterbium Fiber	
Central Wavelength	1064nm	
Power Wattage Options	20, 30, and, 50 watts	
Lens Size Options	163mm	254mm
Marking Field	110mm x 110mm	170mm x 170mm
Focal Distance (approximate)	183mm	285mm
Max Part Height	15.75"	11.75"
Frequency Range	2 - 200kHz	



FEATURES

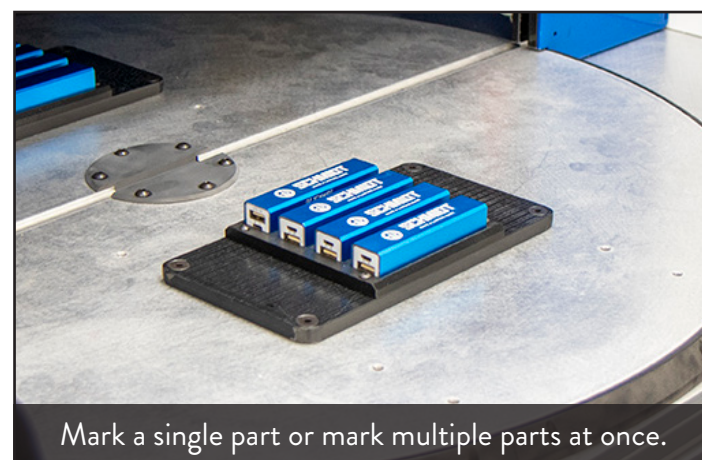
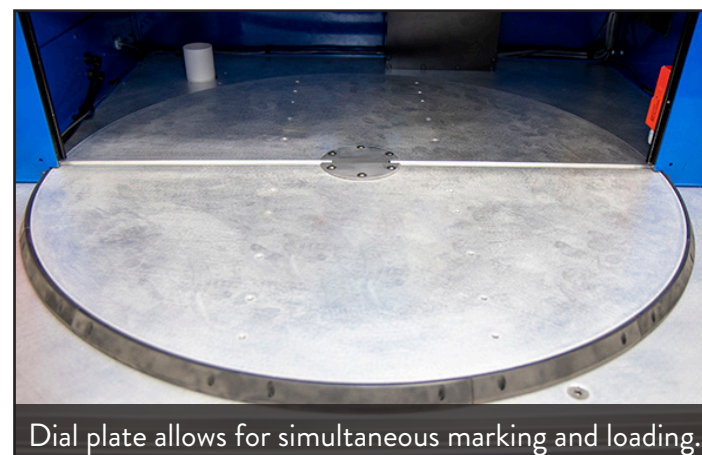
- TWO-POSITION ROTARY INDEXING DIAL PLATE
- DUAL-PALM SAFETY CONTROLS
- 20, 30, 50, AND 100-WATT OPTIONS
- STAND ALONE WORKSTATION
- 5" X 11" VIEWING WINDOW
- 2-YEAR WARRANTY

COMMONLY SOLD WITH

- FUME EXTRACTOR
- BARCODE READER
- LIGHT CURTAINS
- CUSTOM FIXTURING



GeoMARK *Pro RD* *



The GeoMARK Pro RD features a rotating dial plate that moves parts in and out of the laser's marking field. Half the plate sits outside the enclosure, allowing you to save time by loading parts while another set is being marked. Custom fixturing is available to ensure your parts are properly placed every time.

Easy-to-use windows-based software makes creating layouts, text, and importing images a breeze. Additionally, you can easily generate 1D barcodes, 2D data matrices, QR codes, and implement serialization and date/time codes.

MACHINE SPECIFICATIONS

Dimensions (W x D x H)	46" X 39" X 72"
Required Compressed Air	80 PSI 2SCFM
Power Input	110v - 3 connections required (laser, PC, and monitor), 4 connections with a fume extractor
Z-Axis Control	Powered, programmable
Control Panel Buttons	LCD touchscreen, start, stop, emergency stop
Computer And Operating System	PC with Windows 11. Monitor, keyboard, and mouse included.
FDA Classification	Certified class I laser enclosure

LASER SPECIFICATIONS

Laser Source	Q-Switched Ytterbium Fiber		
Central Wavelength	1064nm		
Power Wattage Options	20, 30, 50, and 100-watts		
Lens Size Options	163mm	254mm	330mm
Marking Field	110mm x 110mm	170mm x 170mm	230mm x 230mm
Focal Distance (approximate)	183mm	285mm	386mm
Max Part Height	8"		
Frequency Range	2 - 200 kHz		



FEATURES

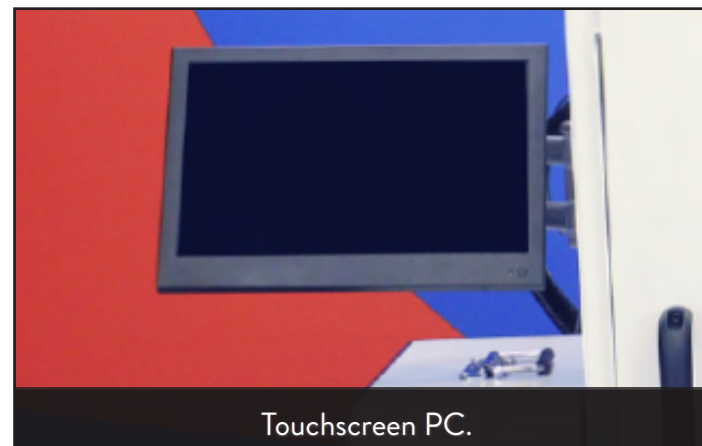
- 20-WATT FIBER LASER
- COMPACT, PORTABLE DESIGN
- TOUCHSCREEN PC ON MOUNTED SWING ARM.
- ONE-YEAR WARRANTY

COMMONLY SOLD WITH

- MOBILE CART
- FUME EXTRACTOR
- ROTARY DEVICE
- BARCODE READER
- CUSTOM FIXTURING



GeoMARK *Eco Plus*



The GeoMARK Eco Plus is a compact and affordable Class I marking laser. As with the GeoMARK Pro, the Class I enclosure makes it safe to operate the Eco Plus in any work environment, and is ideal for anyone looking for the safety of the GeoMARK Pro in a smaller package.

The GeoMARK Eco Plus features a 20-watt fiber laser, mounted touchscreen PC, and easy-to-use laser-marking software capable of setting up data codes, serialization, and many other forms of data.

MACHINE SPECIFICATIONS

Dimensions (W x D x H)	29" x 28" x 28.375"
Power Input	110V
Z-Axis Control	Manual Handwheel
Control Panel Buttons	Power key switch, emergency stop
Computer And Operating System	Touchscreen all-in-one PC with Windows 10.
FDA Classification	Certified Class I Laser Enclosure

LASER SPECIFICATIONS

Laser Source	Q-Switched Ytterbium Fiber
Central Wavelength	1064nm
Power Wattage	20 watts
Lens Size	160mm
Marking Field	100mm x 100mm
Focal Distance (approximate)	176mm
Max Part Height	11.3"
Frequency Range	20 - 60kHz

FEATURES

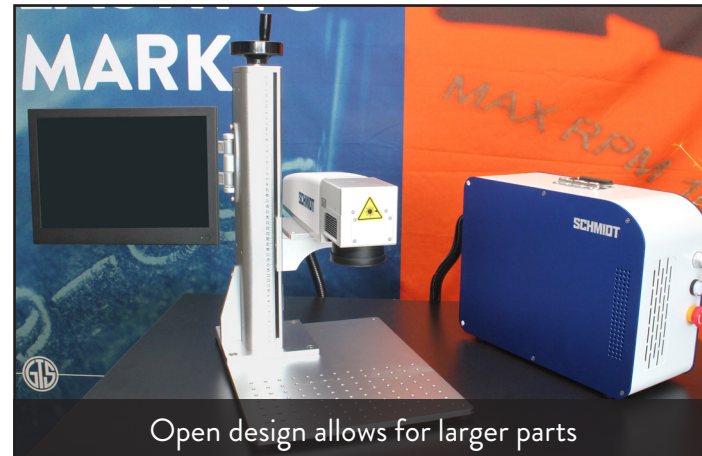
- 20-WATT FIBER LASER
- COMPACT, PORTABLE DESIGN
- TOUCHSCREEN PC ON MOUNTED SWING ARM
- ONE-YEAR WARRANTY

COMMONLY SOLD WITH

- FUME EXTRACTOR
- BARCODE READER
- ROTARY DEVICE
- CUSTOM FIXTURING



GeoMARK *Eco*



Open design allows for larger parts



Compact controller



Powerful 20-watt laser

The GeoMARK Eco is a powerful and affordable Class IV marking laser. With a long z-axis of travel, this 20-watt fiber laser was built for a variety of laser marking applications usually limited by an enclosed system.

The Eco comes with windows-based software that's easy-to-use and versatile, capable of creating layouts and text as well as importing images. Use it to generate 1D barcodes, 2D data matrices, QR codes, and easily implement serialization and date/time codes.

MACHINE SPECIFICATIONS

Dimensions (W x D x H)	22" x 23" x 26"
Power Input	110V
Z-Axis Control	Manual Handwheel
Control Panel Buttons	Power key switch, emergency stop
Computer And Operating System	Touchscreen all-in-one PC with Windows 10.
FDA Classification	Class IV laser (safety goggles required)

LASER SPECIFICATIONS

Laser Source	Q-Switched Ytterbium Fiber
Central Wavelength	1064nm
Power Wattage	20 watts
Lens Size	160mm
Marking Field	100mm x 100mm
Focal Distance (approximate)	176mm
Max Part Height	11.3"
Frequency Range	20 - 60kHz



Our GeoMARK laser marking systems and laser components can be equipped with standard accessories to help you mark parts safely and efficiently.

ACCESSORIES INCLUDE:

- Mounted Swing Arm
- Rotaries
- Fume Extractors
- Mobile Support Cart
- Lens Cleaning Kit
- Safety Goggles
- Different Lens Sizes (GeoMARK Pro only)
 - 163 (standard), 254mm, and 330mm
- Different Laser Wattages (GeoMARK Pro only)
 - 20w (standard) 30w, 50w



MOUNTED SWING ARM

Need to conserve workspace? Get our GeoMARK Pro with a mounted swing arm that holds a monitor, keyboard, and mouse.



ROTARIES

Rotary devices are ideal for marking round parts as they hold and rotate during the marking cycle. A variety of rotary device chuck sizes are available.



FUME EXTRACTORS

Choose from a variety of fume extractors with our laser systems to help clear the air and minimize debris build up inside the enclosure.



MOBILE SUPPORT CART

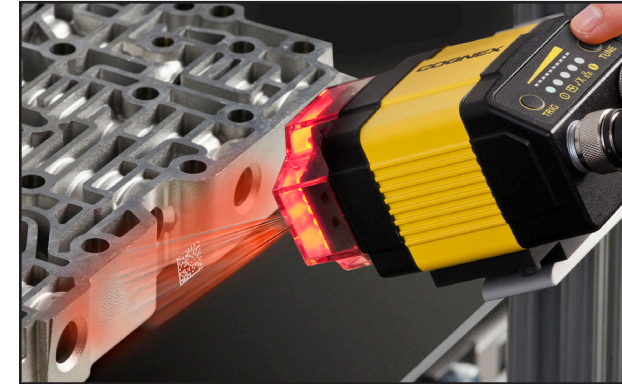
Our mobile support cart, with adjustable height crank and lockable caster wheels, helps ease travel around the shop floor. It measures 40" wide and 30" deep. The height is adjustable from 23" to 31".



GT SCHMIDT can design and build laser solutions just for you. We have standard options that can be modified and added to our GeoMARK lasers or implemented in a laser marking system designed from the ground up specifically for your application.

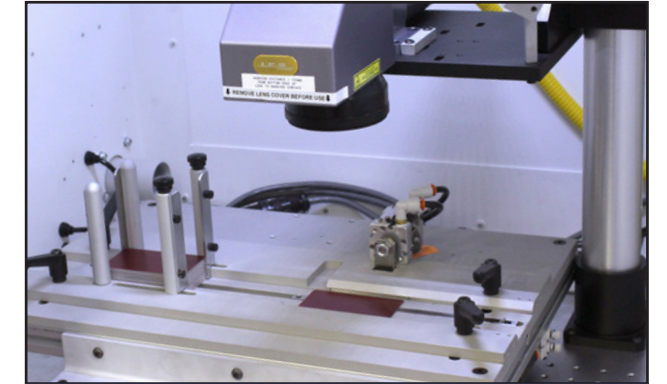
OPTIONS INCLUDE:

- Custom Part Fixturing
- Vision Systems
- Part Feeding Systems: Shuttle Feeds, Pick n' Place and Conveyor Belts
- Rotary Dial Plates, Indexing Tables, X-Y Tables
- Horizontally Mounted Lasers
- Multiple Laser Heads
- Safety Light Curtains
- Dual Palm Controls
- Custom Class I Enclosure Sizes



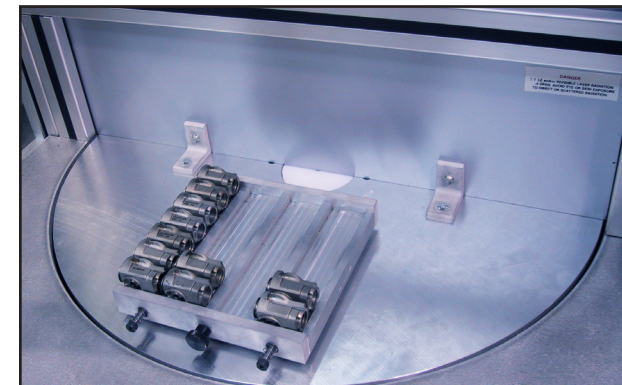
VISION SYSTEMS

Get fixed, mounted readers as well as portable handheld readers for complete reading and verifying data marks in an all-in-one system.



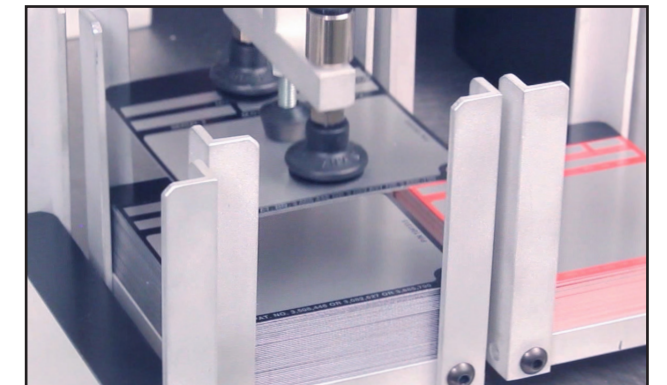
SHUTTLEFEEDS

Standard shuttles accommodate nameplates with a minimum thickness of .020" aluminum and .018" stainless. Sizes can range from 0.5" x 1" up to 4" x 4". Shuttlefeeds can be custom designed for larger nameplates.



ROTARY DIAL PLATES

Rotary dial plates help minimize downtime. Parts can be loaded onto one side while a second set of parts are being marked inside the enclosure.



PICK AND PLACE

Pick and place systems pick up a part and place it into the marking field. They are great for applications with a variety of tag sizes.



APPLICATION-BASED DESIGNS



GT SCHMIDT can design, manufacture and implement a laser marking system to fit your part sizes, marking field requirements, automated feeding and handling needs, or any other system aspect specific to your laser application.

From mechanical, to electrical, to software development, GT SCHMIDT has the capabilities to design and build your perfect laser marking solution.

APPLICATION-BASED DESIGNS:

The following pages have some examples of laser marking systems we have built for customers. Their challenges range from part size, shape, weight, multiple mark locations or having to mark a lot of parts in a short period of time. We found the perfect solution for them and we are confident we can do the same for you.

To discuss your specific application contact your GT SCHMIDT sales engineer today. Find yours at gtschmidt.com/sales-network

HEX FITTINGS

This Class 1 system features a horizontally-mounted laser and an automatic conveyor feed is used to mark four hydraulic hex fittings in two locations simultaneously. The operator loads parts onto a secured fixture and actuates the system, feeding the parts to the marking station where they are all marked.

After the marking is completed, the conveyor moves forward, and drops the parts into a tote. As the fixture rotates to the bottom of the conveyor, another fixture is pulled into the marking field, and the operation repeats.



PLASTIC LIGHTING

To mark a 2D data matrix onto (4) plastic lighting shells simultaneously, we designed and built a Class 1 laser marking system with two laser heads and a custom fixture.

After the lighting shells are loaded manually onto a four-position rotating support fixture, the automatic door closes, and the marking cycle is initiated.



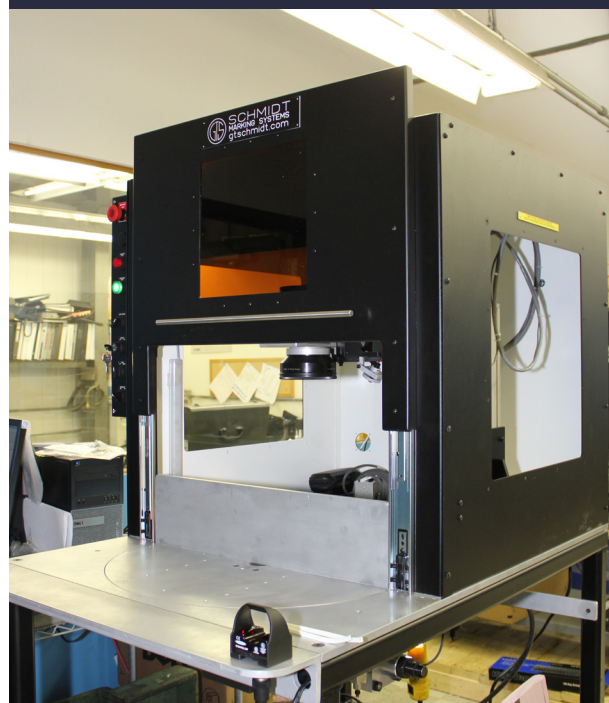
APPLICATION-BASED DESIGNS



MILITARY DEFENSE

Handling heavy parts to be marked can be difficult, so this Class 1 laser marking system was built with an automatic door and slide table for ease of part placement. The table is manually pulled forward by an operator and the large product is eased into place onto a support fixture.

After the part is secured onto the fixture, the slide table is manually pushed back into the enclosure, the automatic door closes, and the part is marked.



CUTTING TOOLS

To mark cutting tools more efficiently, this Class 1 laser marking system was designed with an automatic door and a two-position rotary indexing dial plate with two fixture bases on either side.

After the tools are loaded on one side, the automatic door closes and the tools are marked. During the marking cycle, the operator loads the fixture sitting outside the enclosure. When the marking cycle is complete, the door opens and the rotary dial indexes 180 degrees to begin the next marking cycle.

BEDFRAME RAILS

Although large parts can be marked by a laser without an enclosure, an enclosure may be preferred or needed to operate the laser safely in an open working environment.

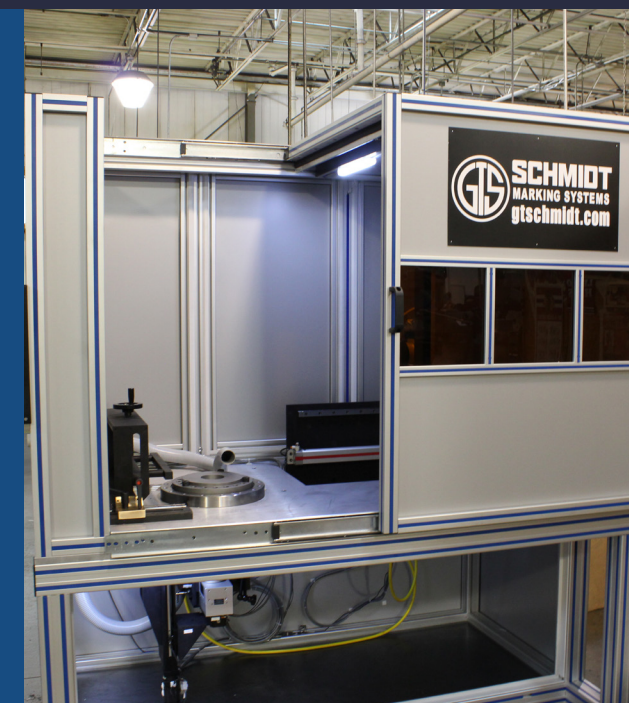
This Class 1 laser marking system was designed for marking large medical bed frame rails up to 105" long. The bed frame rails are placed lengthwise onto a support fixture and the dual doors are manually closed. Inside the enclosure, the part is marked lengthwise on the flat surface of the bed rail.



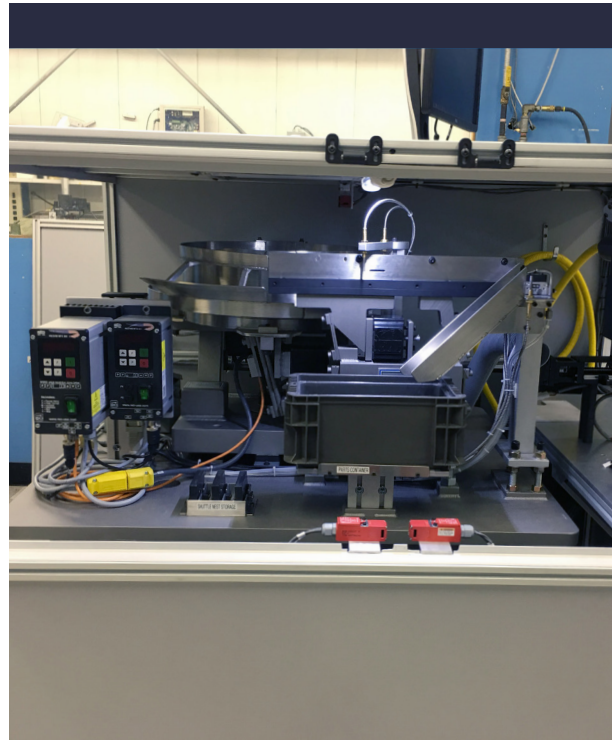
DRILL BITS

Dual marking heads were built within this Class I laser marking system to minimize the need to move the drill bits being marked, each weighing up to 2000 pounds.

The lasers marked the drill bits in two different places simultaneously: one underneath the part at a fixed location to mark radially on the top surface of the bit, and the second mounted horizontally on a programmable "Z" and "X" axis slide to mark into the horizontal breaker slot surface of the drill bit.



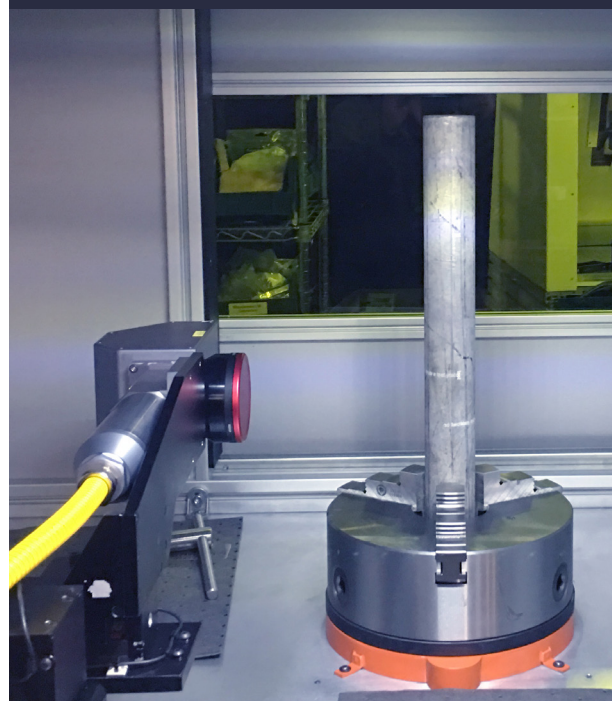
APPLICATION-BASED DESIGNS



ELECTRICAL FITTINGS

For this application, an automatic bowl feed and conveyor were installed within a Class 1 enclosure with a horizontally-mounted laser to mark round electrical fittings. The feed system is adjustable to allow for multiple sizes of electrical fittings.

Parts are batch loaded into the bowl feed by an operator and the doors of the enclosure are closed and secured. The automatic cycle is initiated and the laser system feeds and marks each part at the rate of 2 to 3 seconds per part.



PRESSURE VALVES

Designed to mark pressure control valves weighing up to 100 pounds each, this Class 1 laser marking system houses a vertical rotary fixture and a laser marking head horizontally-mounted on a programmable "X" and "Z" axis.

Parts are loaded from the top of the system and the marking enclosure includes a side access door for easy access and maintenance. The laser moves along the programmable "X" and "Z" axis to mark around the diameters of pressure control valves of various sizes.

DENTAL CROWNS

This Class 1 system has a horizontally-mounted laser and a two-position rotary indexing dial plate to mark multiple dental crowns. The first set of crowns are inside the light-tight enclosure, nested in a custom built fixture. Meanwhile, an operator is loading a second fixture outside the enclosure on the opposite side of the dial plate.

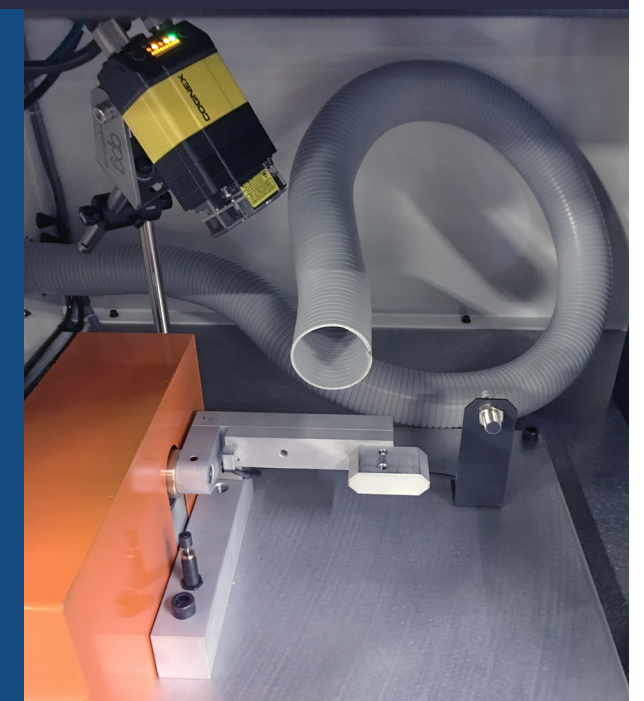
Once the marking cycle is complete, the automatic door opens, the plate rotates 180 degrees to bring the next rounds of parts into the marking area.



RECEIVERS

Instead of using multiple laser marking heads, this Class I laser marking system uses a two-position rotating fixture to support and mark on each side of a firearm receiver.

Each receiver is marked with a serial number and 2D data matrix code. After the marking cycle is complete, the 2D data matrix mark is read and verified by a fixed vision system camera.



SAMPLE MARKING



We know you want to feel confident in your purchase. Let us show you how our laser marking systems can perform for your specific application requirements.

Simply send us a few samples of your parts and we will laser mark them for you. We'll send back your samples with a detailed report of our laser system recommendations based on your part material and process requirements.

Contact us at:
gtschmidt.com/services-sample-marking

CUSTOM SOFTWARE

Sometimes customers require not only a laser built for their specific application but custom software to go along with it. Whether that's software that can interface with other programs or software that pulls in data from other sources, GT SCHMIDT can provide customized software that suits your marking needs.

Contact us to share your software needs and learn more about our custom software services.

Find your Sales Manager:
gtschmidt.com/sales-network



LASER TRAINING

To help you make the most of your laser marking machines, GT SCHMIDT offers training in-person, online, and over the phone.

Take advantage of our training to learn the basics of our laser marking machines, accessories, and software, and to get marking tips specific to your application.

Find our webinars at: gtschmidt.com/news/



INTEGRATION & AUTOMATION



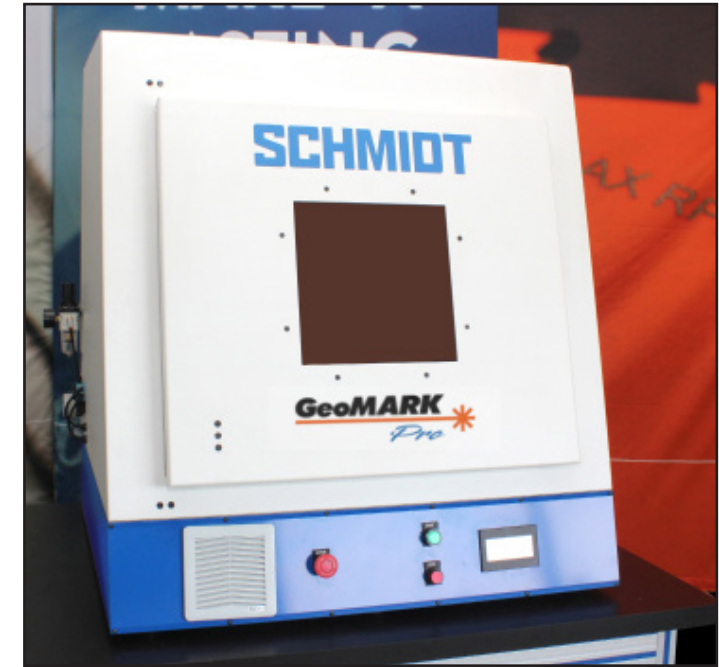
GT SCHMIDT provides turnkey engineering and manufacturing solutions, not only your marking applications, but for any industrial automation requirement.

Our in-house design and engineering department has a full range of services and support to ensure that your industrial automation project is successful.

Learn more:
gtschmidt.com/services-custom-engineering

RENTAL PROGRAM

We offer an affordable rent or lease option on our laser marking systems. Whether you have a short-term project or a limited budget, we make it easy to rent a marking system for your specific needs and offer a number of equipment financing third-party options.



Contact us:
gtschmidt.com/marketing-systems-rent-lease

FACILITY EVALUATION



Whether you have a current marking solution in place or have questions about establishing the right one, we are here to help. Our GT SCHMIDT technical specialists can provide a free facility evaluation and recommend how to best solve your current needs.

Our highly-skilled engineering and design team can give constructive insight right in your own facility.

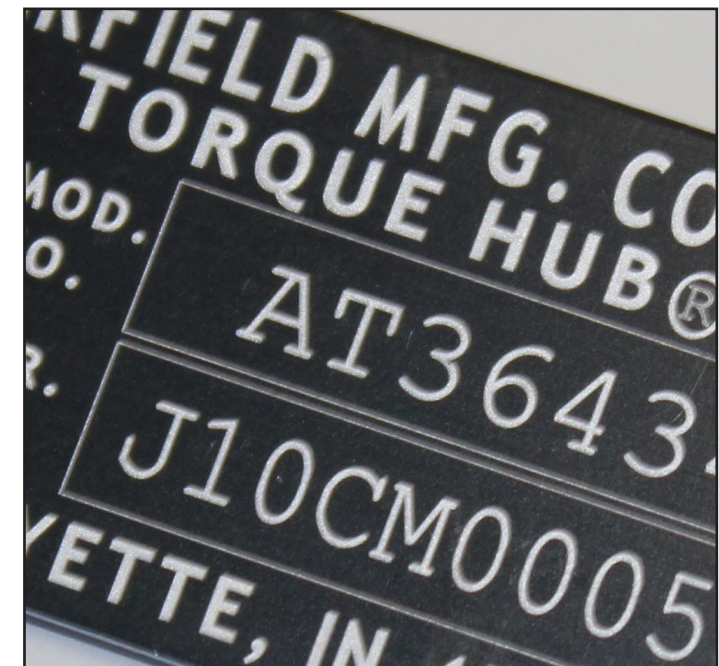
To set up an appointment, visit:
gtschmidt.com/services-facility-evaluation

CONTRACT MARKING

Don't have the resources to mark your products in-house? Let GT SCHMIDT be your trusted partner in providing the product marking process you require.

Our team of experts can handle your most sensitive components and ensure precise marking tolerance. With a wide range of capabilities, we are your complete contract marking source!

Let us provide you a quote today. Contact us at:
gtschmidt.com/contract-marking-services





SCHMIDT

MAKE A LASTING MARK

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